

Patent Claims

1. A method for machining a workpiece (1) by means of a rotating tool (2) provided with at least one cutting edge (3), in which method the machining operation is interrupted at predetermined time intervals, the tool (2) is moved away from the workpiece (1), and a wear measurement is subsequently carried out on the tool (2), characterized in that after the wear measurement the tool (2) is returned at least into the feed position assumed by it before the interruption and the machining operation is continued, and that subsequently within a period of time the tool is continuously fed for compensating the wear measured.
2. The method according to claim 1, characterized in that the speed and/or period of time of the continuous feed of the tool for compensating the wear measured is defined through the machining path.
3. The method according to claim 1, characterized in that the speed and/or period of time of the continuous feed of the tool for compensating the wear measured is defined through the machining time.
4. The method according to any one of claims 1 to 3, characterized in that the speed and/or period of time of the continuous feed of the tool for compensating the wear measured is defined through the wear measured.
5. The method according to any one of claims 1 to 4, characterized in that an error message and/or a warning message is transmitted if the continuous feed of the tool for compensating the wear measured has not been completed

yet by the end of the predetermined time interval for carrying out the next wear measurement.

6. The method according to any one of claims 1 to 5, characterized in that the wear is measured along the whole cutting edge (3) of the tool (2).
7. The method according to any one of claims 1 to 5, characterized in that the correction is carried out sectionwise for individual small sections along the cutting edge (3) of the tool (2).
8. The method according to any one of claims 1 to 5, characterized in that the wear is measured on an enveloping body formed during rotation of the tool (2).
9. The method according to any one of claims 1 to 8, characterized in that the tool (2) is fed for wear correction in a direction normal (perpendicular) to the workpiece surface (4).
10. The method according to claim 9, characterized in that the feed normal to the workpiece surface (4) is carried out on the basis of the engagement points of the cutting edge of the tool (2) which are predetermined by a machining program.
11. The method according to claim 9, characterized in that the feed normal to the workpiece surface (4) is carried out on the basis of an online calculation of the engagement points of the cutting edge of the tool (2) in dependence upon the respective material removal.
12. The method according to any one of claims 1 to 11,

characterized in that the predetermined time interval is determined on the basis of the respectively current material removal of the cutting edge (3).

13. The method according to any one of claims 1 to 12, characterized in that a tool change is carried out when a predetermined maximum total wear of the tool (2) has been reached.
14. The method according to any one of claims 1 to 13, characterized in that upon change of the tool (2) the machining operation is continued at the place of the preceding interruption and the continuous feed begins with a smaller value, so that the tool (2) is not yet in engagement with the workpiece surface (4) at the beginning of the feed.
15. The method according to any one of claims 1 to 13, characterized in that, after the wear measurement has been performed on the workpiece (2), the feed is carried out at a slightly superelevated level for compensating errors caused by the wear so as to compensate elastic deformations of the tool (2).
16. The method according to claim 15, characterized in that the additional feed is also carried out in lateral direction and/or in normal direction relative to the surface (4) of the workpiece (1) for compensating for lateral deviations of the tool (2).
17. The method according to any one of claims 1 to 16, characterized in that the continuous feed is carried out in linear fashion.

18. The method according to any one of claims 1 to 16, characterized in that the continuous feed is carried out in non-linear fashion.